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ABSTRACT

This paper, one of several on the theme of economy and culture in the politics of nation building, was written for the Ninth World Congress of the International Political Science Association. The author's aim is to indicate the role of modern education policy in the world's socio-economic development, especially in developing countries. Access to education is observed to be an important political problem as it is the subject of contradictory interests of social groups and classes. Lack of personnel is another obstacle analyzed in detail for particular continents, with a focus on educational costs. The future aims of educational development are characterized and the financial needs of education are indicated in relation to shortages of funds in developing nations. The necessity to carry out radical changes in present education systems is emphasized. In conclusion it is noted that achievement of these goals in educational planning and development will rely on joint action between developing nations and international agencies such as Unesco. A related document is SO 007 169. (Author/KSM)

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Theme

POLITICS BETWEEN ECONOMY AND CULTURE
LA POLITIQUE ENTRE L'ECONOMIE ET LA CULTURE

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Commission

ECONOMY AND CULTURE IN THE POLITICS OF NATION-BUILDING

Ali MAZRUI

Topic - Sujet

The Rôle and Tasks of Education in the Politic of Evolution of the Modern World (with especial regard to the developing countries)

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The Rôle and Tasks of Education in the Politic of Evolution of the Modern World /with especial regard to the developing countries/.

This paper comes under the subject group "Economy and Culture in the Politics of Nation Building" and has as its main aim the indicating of the rôle played by qualifications and improved standard of education of a society in the development of the modern world, as a requisite element for the proper development of many countries. To-day, education policy is an important element in economic, social and cultural politics.

The problem of accessibility of education comprises an important political problem, the subject of conflicting class and social interests even to-day, when the numbers of educated people from each young age group are universally increasing in avery country. On the eve of a scientific-technical revolution, qualifications increase in meaning with each year. Together with scientific research, technical and organizational advancement, they play a decisive rôle in development. "Investing in man", improving the standard of education and qualifications, is universally accepted as the most influential factor in maintaining a high rate of economic growth and the most profitable investment.

The demand for highly qualified personnel in highly developed countries increases each year. Changes in the qualification structure of personnel employed in economy and culture lead towards a rising demand for those with high school

and university education. New professions and specializations are appearing and those occupations which require only short training are gradually losing raison d'etre.

The quantitative and qualitative development of education is frequently assessed as insufficient in relation to the existing needs, in spite of the gradual generalization of the elementary, then high school and in some countries also university, as well as different forms of permanent education. The quality is assessed as the weakest link in the education system, even in the most highly developed countries. There are numerous opinions that the present "education explosion" is concurrent with an educational crisis. Special publications, frequently the results of scientific conferences, are give over to this crisis.

Efforts to eliminate illiteracy have not yet been completely successful in many developing countries, but even if they had been, it would have been insufficient in to-day's world to enable anyone to take up work in the national economy, as it is frquently necessary to have at least full access to elementary education.

Shortage of qualified personnel is an important restraining barrier in the economic development of many poorly developed countries of the world. The increase in the number of educated people is not proportionate to the resing demands. The difficulties are increased by the fact that in several countries higher education develops first even though there is no way of assuring graduates work in their own profession in their own country; high schools are later developed, with-

out ensuring elementary education for all the young population. There is often a drain of university qualified personnel to highly developed countries which offer higher salaries. All these factors mean that the educating of personnel in underdeveloped countries is still one of the most difficult problems.

The gradual spread of education results in a considerable increase in expenditure in the budgets of the individual countries and their national incomes. Everything points to the fact that this process will be further emphasized in the future. Material collected by UNESCO illustrates this fact.

Data according to continents and development of countries are given in Tables 1 and 2.

Table 1

Expenditure from public funds allocated to education, in percentage of the national income

Specification	1960	1965
World	3,6	4,5
Developed countries	4,7	6,2
Developing countries	2,9	3,8
Africa	3,0	4,3
South America	3,1	4,0
North America	3,9	4,1
Asia	3,3	3,0
Europe /incl. U.S.S.R./	4,2	5,3
Oceania	3,7	4,4

Source: F.Edding, D.Berstecher, L'evolution internationale des depenses d'éducation entre 1950 et 1965, Paris 1969 UNESCO, tableau 6, page 23.

Note: Developing countries are assumed as those in which the national income per capita is less than US$300.- annually and developed countries - those in which the annual national income is over 1,000.- $.

Although the table does not give data on expenditure from private sources, or those of religious and other organizations, it is sufficient to give a general impression of the situation, indicating that conditions of developing countries as compared with developed countries are not improving. We must also remember that the percentage of the national income of those countries is not the same as that of the more highly developed ones.

It is also worth while comparing expenditure on education in percentage of national budgets.

Table 2

Expenditures from Public Funds Allocated to Education in Percentage of the National Budgets

Specification	1960	1965
World	13.5	15.5
Developed countries	13.6	15.9
Developing countries	13.2	15.5
Africa	14.5	16.4
South America	12.6	15.4
North America	15.6	17.6
Asia	11.8	13.2
Europe /incl. U.S.S.R./	13.5	15.0
Oceania	10.4	15.7

Source: As in Table 1.

The situation as to participation in budget expenditure is slightly more favourable for the developing countries. Considerable effort is made by these countries, to increase expenditures on education. The situation is more favourable in Africa and Latin America and least favourable in Asia, but even in this case one cannot compare the percentage in a developed

and a developing country, and it is difficult to compare the developing countries themselves.

The countries in which there was a high percentage of increase in expenditure on education in the years 1960-1965 include many developing countries, but it is also true that there were many such in which this increase was relatively slow. Here are some figures. The countries in which there was a substantial increase in expenditure on education include: Mali- where expenditure on education rose by 26.5%, Ecuador - 24.8%, Lebanon - 21.4%, Pakistan 20.8%, Guiana - 16.2%, Niger - 15.4%, Cuba - 13.3%, India - 11.9%, Arabian Republic of Egypt - 11.1%, Sudan - 9.5%, Morocco - 9.4%, Cambodia - 9.2%, Nigeria - 9.1%, Kenya - 9.1%, Senegal - 8.8%, Malasy Republic - 8.5%, Uganda - 7.8%, Jordania - 7.5%, Iraq - 7.4%, Costa Rica - 7,3%, Haiti - 6.2%, Ceylon - 3.3%. Data related to the countries given here show substantial differentiation of rates of increase of expenditures on education, depending no doubt, upon the demographic situation, demand and possibilities of individual countries, and also upon the participation of public expenditures for education in the national budget so far. Considerable disproportions in covering the needs for education can still be noted.

Increased expenditure on education in the national income and budgets is related to increasing numbers of pupils during the last few years. This is shown in Table 3.

Table 3

Pupils and Students According to Continents

Continent	School years	Total	in schools		
			1st degree	2nd degree	students
World	1960/61	323.6	248.5	63.9	11.2
	1965/66	411.1	299.3	93.8	18.0
	1969/70	474.5	339.3	110.8	24.4
Europe	1960/61	70.5	49.1	19.3	2.1
	1965/66	78.7	51.0	24.5	3.2
	1969/70	84.7	52.2	28.5	4.0
U.S.S.R.	1960/61	37.8	30.0	5.4	2.4
	1965/66	50.7	38.3	9.5	2.9
	1969/70	53.9	40.5	8.9	4.5
Asia[1/]	1960/61	110.7	87.3	21.1	2.1
	1965/66	148.3	113.9	30.7	3.7
	1969/70	176.5	135.4	35.8	5.3
Africa	1960/61	21.2	18.9	2.1	0.2
	1965/66	29.8	25.9	3.6	0.3
	1969/70	36.6	32.1	5.1	0.4
North America	1960/61	48.7	33.8	11.2	3.7
	1965/66	57.4	32.8	18.7	5.9
	1969/70	65.7	35.9	21.4	8.5
South America	1960/61	31.4	27.0	3.9	0.5
	1965/66	42.3	34.7	6.7	0.9
	1969/70	52.7	41.5	9.8	1.4
Oceania	1960/61	3.3	2.4	0.8	0.1
	1965/66	4.0	2.6	1.1	0.2
	1969/70	4.5	2.9	1.3	0.2

Source: Educational Statistical Year Book 1971/72 p.p. 337-339
1/ without China, Dem. Rep. Viet Nam, Korean People's Republic.

In 9 years, the number of pupils in 1st degree schools in the world, rose on average by 4%, pupils in 2nd degree schools by 8.2% and students by over 10%. There is a distinct increase in the percentage of educated persons from each year group, especially in universities.

The situation differs on each continent. In Europe, including the U.S.S.R., the average number of pupils in 1st degree schools rose by only 2%, in 2nd degree - by over 5%, and in universities - by about 10%. All indices were lower than the general world index. Education in 1st degree schools is fairly widespread and simultaneously, the demographic situation does not favour an increase in the number of pupils due to the low birth-rate. The situation is similar in 2nd degree schools and universities, although in this case the indices for the individual countries is much more differentiated.

In Asia, the number of pupils in 1st degree schools invreased on average by over 6%, 2nd degree schools by 7.5% and the number of students by almost 17%. All the indices were higher than the world average. In Africa, the number of pupils in 1st degree schools increased annually by almost 8%, those in 2nd degree schools by almost 16% and students by 11%. The most characteristic feature here is the greatest increase in the number of pupils in 2nd degree schools, also the fact that the absolute numbers educated continue to be extremely low in schools above elementary level. In North America the number of pupils in 1st degree or elementary schools increased annually not much above 0.5%, those in 2nd degree or secondary schools - by 10% and in universities - by 14.5%. The increase in the elementary schools is due to their being widespread and the low birth-rate, there has been a distinct aim to increase the generalization of secondary schools and universities, however. Secondary education has become almost completely universal. In South America, comprising a concentration of countries of varying degrees of social-economic development, the average

number of pupils in elementary schools increased by 6%, those in secondary schools by almost 17%, and at universities by 20%. The high increase in universities with a relatively low absolute number of educated people, was characteristic. On this continent, there is still a long way to go to generalize secondary education. In Oceania the average annual increase in elementary schools was about 2.5%, that in secondary schools about 7% and at universities - 11%.

Realizing the diversity of education systems, the different criteria for secondary schools and especially for universities, as well as the different demgraphic situations /especially in population age structure/, it can be assumed that the spread of university level schools is illustrated by comparing the numbers attending these with the numbers attending elementary schools. Assuming the number of pupils in elementary schools as 100, in secondary schools of North America in 1969/70 there was almost 60, and in universities - 18. At the same time in secondary schools of Oceania - 45, and at universities - 7. In Europe, including the U.S.S.R., not much above 40 in secondary schools and at universities - over 9. At the same time, in Asia the figures were: secondary schools - 26.5 and universities - 4; those for South America were: secondary schools - 23.5, universities - 3,5; Africa: secondary schools - 10, and universities - 1.1. In can be seen from these figures that university education in most widespread in North America and that the least favourable situation is in Africa, Asia and South America. The disproportion is substantial.

A comparison of the number of girls attending schools with the total number of pupils and students gives a certain picture of the universality of education and its democratization. Data is given in Table 4.

Table 4

Percentage of Women in Schools of Various Level in 1969/70

Continent	Total	Type of School		
		Elementary	Secondary	University
World	44	44	43	38
Europe	48	49	47	36
U.S.S.R.	.	.	.	48
Asia[1/]	38	39	35	28
Africa	39	39	32	25
North America	48	48	49	41
South America	48	49	48	34
Oceania	46	47	44	30

Source: As in Table 3.

1/ Asia excluding the countries given in Table 3.

The percentage of girls in elementary schools is usually high and almost corresponds to their percentage in the total number of young people. The exception is Asia and Africa, where girls frequently do not finish school. As a result, the percentage of girls at secondary schools on these continents is correspondingly low. The figures for Oceania are also somewhat lower. There is only a relatively slight drop in the percentage of girls in Europe and South America. There is a decrease in the percentage of women at university on all continents. The exception here is the U.S.S.R. and only slightly lower is the percentage in North America. The lowest percentage of women at university is in Africa and Asia, where the generalization of education is also the lowest. As can be

seen from Table 3, on several continents, the "education explosion" has not embraced women.

Increased numbers of pupils resulted in a greater demand for teachers. There were not always sufficient numbers of teachers, thus causing larger classes. Due to the lack of material, the standard of education of teachers cannot be compared, but according to information the situation is much more difficult and results in a lower standard of education. Table 5 gives data as to teachers.

Table 5

Teachers According to Continents

Continent	Year	Total	in schools: elementary	in schools: secondary	in schools: university	Total	in schools: elementary	in schools: secondary	in schools: university
			in millions				No. of pupils per teacher		
World	1960/61	12.6	8.2	3.5	0.9	26	30	18	12
	1969/70	19.2	11.2	5.2	1.8	25	30	18	13
Europe	1960/61	8.0	1.7	1.1	0.2	23	28	17	12
	1969/70	4.4	2.2	1.9	0.3	19	24	15	12
U.S.S.R.	1960/61	.	1.2	.	.	.	25	.	.
	1965/66	2.0	1.4	0.4	0.2	25	26	22	19
Asia[1/]	1960/61	4.0	2.9	1.0	0.1	28	30	22	13
	1969/70	6.9	3.9	1.7	0.3	29	35	21	14
Africa	1960/61	0.6	0.5	0.1	0.0	36	39	20	16
	1969/70	1.0	0.8	0.2	0.0	35	41	22	13
North America	1960/61	1.9	1.0	0.6	0.3	25	34	18	12
	1969/70	3.2	1.4	1.1	0.7	20	25	19	13
South America	1960/61	1.2	0.8	0.3	0.1	27	34	12	9
	1969/70	2.3	1.3	0.8	0.1	24	32	13	9
Oceania	1960/61	0.1	0.1	0.0	0.0	25	31	17	11
	1969/70	0.2	0.1	0.1	0.0	23	28	15	9

Source: As in Table 3, p.p. 240-242.

1/ without the countries given in Table 3. The ratio of pupils/teacher was calculated from detailed figures.

It is characteristic that throughout the world, in nine years, the ratio of pupils per teacher has not changed basically. This situation is not uniform on all continents however. In Europe there was a distinct improvement in indices at all levels except university. In Asia there was a worsening of the situation in elementary schools, but a slight change only at other levels. There was a deterioration of the situation in elementary and secondary schools in Africa, but an improvement at university level. North America showed an improvement in elementary education with a slight deterioration of index for universities. In South America there was a steady improvement, especially in elementary schools. There was a visible improvement at all levels in Oceania.

The problem of securing the necessary number of well-trained teachers will be one of the most difficult to solve in the future. In many countries many teachers are leaving the profession for better paid jobs, which fact further complicates the situation.

To a great extent, the education explosion characterized was connected with the accelerated rate of economic increase on many continents. Reckoned per head of population, the average rate of increase in the national income in permanent prices, amounted, in 1956-1960, to 2.8%, in 1961-1968 - 3.4%, this including 6.7%, and 5.9% in European socialist countries 2.1% and 3,8% in developed countries, 2.1% and 2.3% in developing countries. In the light of these figures, the situation of the developing countries /taking into account the classifying of countries to this group/, is unfavourable and indicates a continuing disproportion and difficulty for edu-

cation to fulfil its most necessary tasks.

The situation is also similar in industrial production. Taking 1960 as 100 reckoning in permanent prices, the world industrial production per head of population amounted to 144 in 1968, in the European socialist countries - 180, in developed countries - 141, but in developing countries - 136 /if we take into account global production, then the figure for developing countries in 1968 was 168, for developed countries - 156, rapid increase in population has an unfavourable influence on this situation/.

The approximate economic indices given, show that at present it is difficult to talk about overcoming the economic distance between the developed and developing countries. Improving the level of education of society is undoubtedly one of many factors which can help to solve this problem. So far, however, it is difficult to say that in spite of considerable efforts, education would be able to play a fundamental role. Thus in future, it will be necessary to solve fundamental problems, greater than the present ones, which will require the systematic increasing of expenditure on education in both budgets and national incomes. The basic tasks of the "education explosion" will face the developing countries in the future, and the solving of these will give rise to numerous difficulties and problems. It is so important for the future development of these countries, however, that education can be accepted as one of the main political problems requiring concentration of efforts and means. It will be necessary to take into account the need to speed up the rate of economic growth, the increasing role of industrialization and gradual transfor-

ming of the social-economic structure of the developing countries, and this is impossible without education. Against this background, let us try to define the assumptions and tasks facing education in these countries in the future.

The outlined increase in the numbers of pupils and teachers resulted in substantial financial efforts to raise the global costs of education. It was possible to obtain data based on material from UNESCO's Statistics Office, calculated in dollars and thus only approximate, otherwise this would be useless for comparison. It appears from these data that taking into account only budget expenditure from public sources, there was an increase between the school year 1960/61 and 1967/68 of 95% in Africa, 110% in North America, 104% in South America, 115% in Asia /without China, the Korean Democratic Republic and the Democratic Republic of Viet Nam/, 107% in Europe and 133% in Oceania. It should also be added that taking all public expenditure as 100 in 1968, then over 88% of the total fell to Europe and North America. In spite of the tremendous efforts on the part of developing countries, to improve education, the means are still modest.

Expenditure on education rose more rapidly that the overall budget expenditure and national income of individual countries.

The increase and rate of increase of expenditures on education is insufficient to conclude whether or not they will suffice. Material from the UNESCO statistics Office is helpful hare, as it indicates that taking into account all young people of elementary school age, in 1967/68 only 68% actually attended, in 1960/61 - 63%, of this, in North America - 98%, in

Europe - 97%, in Oceania - 95%, in Latin America - 75%, in Asia /excluding the previously mentioned countries/ - 55%, in Africa - only 40%. These figures clearly indicate the need for and extent of expenditure necessary to generalize elementary education.

In the 1967/68 school year, secondary education in the world, embraced on average 40% of children of secondary school age /34% in the year 1960/61/. In this case, the index in North America was - 92%, in Europe - 65%, in South America - 35%, in Oceania and Asia - 30%, but in Africa only 15%. The generalization of secondary education would require considerable running, and, especially at first, investment costs to erect school buildings and equip them properly.

The coefficient of students per 10,000 head of population amounted on average in 1967/68, to 77.2 /in 1960/61 only 48/. A considerable rate of increase and even greater differentiation between the continents can be seen. In North America, this coefficient amounted to 235.6, in Oceania - 118.1, in Europe - 114.8, in South America - 42.5, in Asia - 39.5 and in Africa - 11.0. Full generalization of university education would necessitate - irrespective of difficulties related to suitable teaching staff - expenditures unachieveable for many countries.

The increase in expenditure on education so far, should be recognized as insufficient to cover needs, and also as a factor which slows down economic growth and social changes in developing countries. The clearly insufficient aid offered by developed countries up to the present, does not play any important role. According to UNESCO estimates, in 1967 this

amounted to only 5-6% of all public expenditures on education in developing countries. These countries are thus left to their own means, which is not an easy matter. There are substantial differehces in aid offered by developed countries, this being from 2% of public expenditure for education to 25-30% in some countries, e.g. the former French colonies in Africa.

According to the document issued by the XVIth General Meeting of UNESCO, the process of generalizing elementary education on all the continents, should be completed by 1980. This is imperative to enable realization of development processes even in lower stages of industrialization to which all countries are gradually approaching. Without this it is difficult to imagine the normal realization of political and cultural processes.

Assumptions as regards generalization of secondary schools are much more modest. It ist assumed that the extent of generalization in Africa, taking into account those attending school in relation to the total young population of secondary school age /average/, will amount to 23% in 1980, in Latin America this will be 46%, in Asia - 36%, thus the increase assumed is fairly modest. In developing countries it is also considered necessary to take into account those attending universities, e.g. in Africa 1,5% of the total age group is assumed by 1980, in South America - 8,4%, in Asia - 5.0%, including Arabian countries - 5,6%. Without the generalization of elementary schools and gradual generalization of secondary schools, it is difficult to speak of a larger percentage with university education. The development of universities without the necessary network of lower level schools fails to give required

results and may even frequently outpace the economic requirements. The fundamental expansion of higher education is only possible in later years when, depending upon the country, by 1990 or 2000 secondary education will gradually spread. The main development of university education is a task for the XXIth century in many countries. This does not mean that no increase in the numbers of students is indicated, but more widespread university education can only be considered at a later date, with the social-economic development of a given country.

Each development stage in a country, should be accompanied by clearly defined tasks for education. It would seem that in the case of developing countries, the education development strategy in the XXth century should lead to generalization of elementary education, the gradual, stronger generalization of secondary schools after 1980 and only later widespread university education.

These aims can only be accepted as fitting when defining the general picture synthetically. Looking deeper into social-economical development, it can be seen that in developing countries, alongside those branches of economy which are on a lower technical level than in developed countries, other branches of a high standard are developing, these needing highly qualified personnel. Thus where it is interdend to expand modern economy, it is necessary to educate personnel in secondary and higher schools earlier, also organize modern vacational schools with the best possible technical and teaching aids. The situation is similar as regards training managerial personnel, university level teachers, administrative

and economic personnel. As, in the case of small demand for a given type of personnel, it would be difficult for a country to organize schools, co-operation between developing countries can be expected. Such enterprises should be foreseen in the development plans of the countries. It is also possible that the sending of young people to universities in devoloping countries will be continued. From the social point of view, however, the fault of this solution is that it would mainly enable children of richer families to study if, as is frequently the case, the given country is unable to grant fellowships abroad, or obtain foreign aid in this field.

It is probable that until the required level is reached, there will be social conflict when better training is in greater demand.

To ensure proper development of any country, the number of educated at each level /both secondary and university/, must correspond with the demands of economy and culture established in long-term plans. It might be thought that from the point of view of estimating the cultural role of education, the number of educated should be greater than the established demands. This should not, however, be too great. Mass education in fields and at levels unnecessary for a given country, may result in employment being taken up in a field for which such a standard of education is not required, thus wasting funds spent on this education. There may also then be a drain of qualified personnel to developed countries able to pay higher salaries. In this way, developed countries take advantage of investments on education spent by developing countries. This situation is typical in several developed countries. In view of the diffi-

culties in obtaining means to develop education in developing countries, such losses are felt very keenly. The importance of educational problems means that the tasks should be carefully planned and correspond to the achievements and development stages.

Due to an increase in the birth rate, there will be a substantial increase in the numbers educated, first in elementary schools and then those of a higher level.

This situation will mean that future costs for education will be much higher than at present, and an increased participation in the budgets of particular countries should be reckoned with.

In view of a relatively moderate birth rate and widespread elementary education, the expenditure on education in developed countries does not increase to any substantial degree as the result of increased numbers of pupils. The number of pupils attending secondary schools will rise, due to the generalization of such education by 1980 or 1985. It is expected that expenditures on university education will increase most. The demands of scientific-technical advancement will give rise to the demand for university trained personnel. This will result in investment requirements for university expansion and modernization of teaching methods.

It is also possible that there will be a rise in costs of education, due to its being recognized as an especially important branch of economy and thus the decision may be taken to raise the salaries of teachers, these differing greatly on various continents and between individual countries. It is difficult to foresee these many years in advance. A certain

increase in pay in each country will be related to the higher standard of education of teachers. These tendencies are generally visible. Increased tasks give rise to a greater demand for teachers. The difficulties in satisfying this demand must be overcome during the whole of the future period. It must be remembered that without a sufficient number of good teachers it is impossible to think of the proper realization of the education tasks.

Another factor which will increase education costs in the future, may be the gradual "industrialization" of the teaching process, the wider utilization of such aids as audio-visual devices, programmed teaching, various machines, including computers. It can be expected that by about 1980 and especially the following years, this factor will considerably influence the costs of education first in developed and somewhat later in developing countries. Difficulties in finding personnel may accelerate attempts to adopt modern means, e.g. television, for teaching, in developing countries, and this may affect the costs before 1980.

A necessary factor will be increased tasks in permanent education. Its role will undoubtedly increase steadily, first in developed countries, then parallel with higher development stages, in developing countries. The demands of technological advancement will give rise to substantial demands for continued professional improvement in the form of post-graduate courses, and also in secondary schools, changes in specialization and even profession by thousands of people.

The situation in each country will differ, of course, the demographic situatiins result in very different requirements. The climate causes extremely differing demands for school buildings, the costs tending to rise everywhere, however. Increasing costs of education will be necessary in every country for both economic and social reasons.

Without an adequate standard of education of a population it is impossible to increase labour output in those branches of production where it can be indicidually measured. Where it is impossible to define the indicidual result of work of one person, e.g. in highly mechanized or automated industry, it is impossible for work to be carried out properly without suitable professional training. The role of education in the economic growth of a country is becoming increasingly important. Education is socially and politically important, it raises the cultural level of society, develops the character of the individual and is an important factor in the cultural development. It is impossible to imagine correct development processes in any country if there is insufficient expenditure on education, if it is not developed systematically and as democratically as possible, educating both men and women, people from all social environments. The social and economic role of education must be parallel.

It must be remembered that the need for greater expenditure on education is higher in developing than in developed countries. Alongside the needs connected with generalization of education and modernization of the education process, as mentioned, mention must be made of the under-financing of education in these countries. There are several reasons for

this. Let us mention only a few of them. In some countries the number of pupils per teacher is extremely high and is sometimes about sixty or even 100. These contraste have disappeared in average numbers according to statistics for continents. This situation results from the lack of teachers. As in many countries unqualified teachers are employed, their salaries are low, frequently amounting to only half to those paid to qualified personnel in the same countries, and the general level of teachers pay is even so not very high in developing countries. Calculations carried out in many countries indicate that to ensure a suitable standard of work, the unit costs should be 2 to 2.5 times higher than at present. To this should be added the necessity to improve the equipping of the majority of schools.

All the countries in the group in question find it difficult to obtain the necessary means, where there exist many urgent needs, the problems of education are sometimes pushed aside. Let us add to this, that preliminary calculations in some of the countries indicate that to realize their aims in the development of education, it would be necessary to designate up to 20% and sometimes even 30% of the total state budget expenditures, or territorial budget expenditures. It may be very difficult, or even impossible to achieve the standard indicated here. This is determined, to a considerable extent, by the order of magnitude of educational tasks set for 1980. Taking into account difficulties, we must remember the need for continuous attention to the demands of education and treat it as an especially important factor for both economic growth and social development. Higher stages of development cannot be

achieved without realization of education plans.

Most probably, certain financial reserves can be found in university level education, where, in certain countries, the unit cost per student is very high. Experiments in the adopting of some modern teaching techniques can also be continued. These means, from the very nature of things, are of only limited use. Other means of lowering costs can also be considered, e.g. the shortening, within reason, of elementary education, adopting of cheap investment solutions when building new schools, at the same time, enabling modern teaching methods to be adopted, which is no easy task.

Aid from highly developed countries should not be relied upon too much. A certain increase is possible, but each country should count on its own powers.

The importance of education in the economic development of the countries has been emphasized. It should also be stressed that as the given standard of education is generalized, various political conflicts may occur which did not take place as long as the numbers of educated persons were relatively low. Another factor to foresee is nationality conflict in the case of multinational states, this frequently taking place in developing countries, tribal conflicts, or as is often the case-conflicts between different classes and social layers. The essence of a country's educational policy should be the widest possible democratization of education, opening the way for all pupils with the necessary abilities. This will be easier when the percentage threshold of the generalization of a given standard of education is surpassed, but difficulties must be expected. As mentioned initially, education is in great demand by

modern society, and extremely important for all countries desiring to speed up development, modernize their social-economic structure and achieve a higher national income per capita. With moderate optimism, it can be hoped that by about 1990-2000 secondary education will be more or less general, ~~aby~~ and by 2020-2030 higher education. This, of course, is taking into account a situation in which there would be no wide-scale armed confict and a gradual decrease in expenditure on arms and armed roces, without this there would be no conditions for the development of education.

It is to be expected that the educational process will be substantially modernized. As stated in the Edgar Faure group raport prepared for UNESCO in 1972, we shall witness radical changes in the education system during the next 20-30 years. This also concerns the developing countries.

Learing will begin earlier, depending upon the wider introduction of pre-school education, and will last all one's life. The idea of permanent education is beginning to take shape in facts. It will be possible to eliminate examinations, that plague in the life of pupils, as they will lose their meaning, because everyone will study at his or her own rate. Programmes and study subjects fixed by higher autohorities will also disappear. In a certain sense, the existence of schools themselves is shaken, at any rate as places reserved exclusively for children and youths. The process of preparing pupils for life in society will take the upper hand over the teaching process. A school will not be assessed from the point of view of the amount of knowledge assimilated by pupils, but from the number of mature human beings it managed to educate. These

reforms will be hindered by economic obstacles and the inertia of the education systems. The introducing of changes will take a longer time. Alongside the generalization of education, this will be one of the most important political problems for developing countries, bringing with it far reaching effects in the shaping of the political process and system of individual countries. These matters cannot be solved without ensuring full democratization of education systems, full access to education, equal changes for all young people. Each individual should be given the cgange to chose the method, rhythm and form of education which suits him/her best. An individual who is unsuccessful at a given age or in a given field of learning, will have another chance to continue it, and initial failures will not effect him/her throughout the whole of life. A human being will not stop learning throughout the whole of his or her life, primarily because of the influence of the society in which he or she lives.

Flexibility must be one of the characteristics of future education. The role of new teaching methods and techniques will be very important. The technique of new mass transmission of information is developing in two directions, towards individualization of education /e.g. in programmed teaching/, and towards mass transmission of information /television programmes transmitted by satellite/. School will not play the exclusive role in educating society. It will be necessary to create an "educating society" in each country. It will be necessary to do away with artificial barriers between different cycles and levels of teaching, as well as between formal and informal teaching, introducing an "interrupted" education system. Every-

one will be able to interrupt learning at any time and return to it later.

Not all aims can be introduced at once, but it is imperative that the main directions of future changes be perceived now, in order to develop education in the proper direction. The political importance of these problems cannot be overestimated.

The development of education is closely connected with corresponding planning. Mention should be made of UNESCO's efforts to help organize such planning by arranging international meetings, training planners for many countries. The UNESCO International Institute of Education Planning carries out numerous activities in this field. It initiates research, publishes results of such research, calls together international meetings of experts which are of considerable help to developing countries. Such international aid can be of considerable importance in the realization of education tasks as part of the whole of the development conditions. The limited funds for education have to be spent according to a well-organized plan, rationally, as effectively as possible. Observing previous education plans it can be seen that there are gaps between the planning of extensive tasks and indispensable funds which enable their realization. Only planning in which the true realtionship between tasks and means, and the method of obtaining these means are defined, followed by the consequent realization of aims, is of any calue for the development of education and the raising of the country's social-economic level. The importance of education justifies special emphasis on this sector in future activities. It must be remembered that the aims of education

requiew at least:

- the proper determining of the demand for qualified personnel and the extent to which this can precede the needs of society,
- the carrying out of demographic calculations,
- the specifying of the minimum number of teachers necessary, according to specialization,
- the specifying of investments requirements,
- the defining of tasks and means to modernize the teaching methods and means,
- the defining of the extent of generalization of education possible at various levels and the needs to carry out indispensable reforms in the education system,
- establishing of principles of distributing schools,
- working out of principles of education policy which would enable the ensuring of equal access to education for all young people, irrespective of race, religion, nationality, tribe, class and social group; only widespread democratization of education will enable the picking out of talent and able people, which are especially important in modern development conditions.

Proper development of education, the establishing of tasks and means, require extensive research on these subjects and education economics by UNESCO type international organizations, as well as more detailed studies in individual countries. In such research, education should be treated as one of the most important modern development factors, as an important tool in a country's policies aimed at social-economic changes and the speeding up of growth rate. More assistance should be given

than has been case so far, by developed countries, in the field of education development. This is one of the most important factors in balancing the level of development of individual continents and states.

The results of research, the working out of education requirements, should be the subject of international meetings at government and international organization level, as well as meetings of researchers engaged in the problem. The importance of the problem justifies special attention being paid to it during the next decade. It is also an important political factor.

It should be remembered that the example of the socialist countries, especially the European countries better known to me, the best known being Poland; proves that timely attention to the development of education, comprehensive realization of the tasks in this field, led to it becoming a factor which had an important influence on facilitating the realization of the tasks for the rapid development of a country, bringing about fundamental changes. These led to Poland becoming transformed from an agricultural country into one of modern industry, from a country which, before the war could barely be reckoned among the somewhat better developed in relation to the poorly developed countries, into one which has achieved a higher level than the moderately developed countries and which is reckoned among the developed ones. The proper staging of the development of education, its being adapted to the needs of each stage of social-economic transformations, was one of the important factors in development. The raising of the level of education is a slow process however, therefore the tasks and means must

be determined well ahead. Let us turn our attention to some of the figures in this field. In 1958, the socialized economy in Poland employed 6.3 million persons, in 1968 - 8.5 million and in 1971 - 9.7 million. Of the professionally active group, in 1958 there were 240,000 with university education, in 1968 - 405,000 and in 1971 - 535,000. In recent years there has been a distinct rise in the growth rate of those with university education. Of the group of peole with secondary education, in 1958 there were 440,000, in 1968 - 965 and in 1971 - already 1,400,000. The increase in the last three years was not much less than during 10 years previously. From the group with general secondary education, in 1958 - 275,000 were employed, in 1968 - 385,000 and in 1971 - 550,000. Of those with vocational education on the level of qualified labourers, 520,000 were employd in 1958, in 1968 - 1,305,000 an in 1971 - 1,740,000. The remainder of employed had elementary education or not even completed elementary. The tremendous efforts of previous years brought results during the last few years. To give some idea of the situation, in Poland in the 1971/72 school year, with fully generalized elementary education, 75% of the youth in the 15-18 years age group attended school and 87% of that in the 13-17 years group. In 1960/61 only 65% of the young people in the 14-17 years age group attended school. The change in age in statistics resulted from the extending of elementary education to eight years, thus those attending secondary schools were in the 15-18 age group. In the 1971-72 school year, 87.6% of those completing elementary schools that year were accepted into secondary schools. This data indicates the extent of generalization of education in secondary schools.

The number of university students is also growing gradually.

All those studying the social-economic development factors in Poland are agreed that timely attention to education problems and the realizing of planned generalization of education, played an important role in speeding up the growth process and transformation.

The opinion may be expressed that taking advantage of the theoretical and practical experience of the socialist countries in the field of rapid development of education and the establishing of this as an important development factor, may be useful in the case of developing countries. Similar to them, the socialist countries with the exception of the U.S.S.R., had to make up for delayed development after 1945, thus relatively recently. In the U.S.S.R., the process of generalization of education began in the nineteen twenties.

A deeper characterization of the educational processes in socialist countries could be the subject of a separate paper. A discussion of these here does not seem to be justified.

Concluding our considerations, let us recap the thesis put forward, that the proper shaping of education processes in developing countries is of especial importance for the correct management of political, social and economic processes. Without modern education, there can be no modern economic or social structure. Study of educational policy and its realization is an extremely important section of the system study of a country's political relations, as education is an important sub-system in every state, a sub-system which influences the proper functioning of other sub-systems. Educational research, especially from the point of view of its social and economic role, should belong to

the primary studies in research on political science. The importance of education fully predisposes it to this.

Summary.

The author indicates the role of modern education policy in the world's social-economic development, especially in developing countries. Access to education is one of to-day's most important political problems, the subject of contradictory interests of social groups and classes. On the threshold of a scientific-technical revolution, qualifications increase in importance every year. Lack of personnel is a important obstacle in the development of many developing countries. The author analyzes the educational situation in particular continents in detail and also gives the costs of education. The tasks of education are one of the fundamental political problems requiring the concentrating of forces and means. Without solving these matters it will be impossible to achieve a rapid economic growth rate, favourable transformations of social structures, modernization of countries' political structures. In turn, he gives the characteristics of future aims in educational development. The author indicates the financial needs of education, these related to shortages of funds for this in many countries so far. He also indicates the necessity to carry out radical changes in the present education systems, the important role of regular education, the individualization of the education process, the necessity to create an "education society" in every country, playing, jointly with school, an important function in organizing the education process of society. He indicates the extent and manner of democratizing education systems. Flexibility must be a characteristic of future education. Correct planning of education is very important. Up to now there has often been a gap between the tasks and the means to realize them. Correct development of education requires joint action by countries and UNESCO is especially predisposed to act in this direction.